



N 404.000

N 403.000

LEGEND

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS AT THE TIME.

LOW WATER DATUM

ELEVATIONS AND PROJECT DEPTHS ARE REFERRED TO INTERNATIONAL GREAT LAKES DATUM: (1955) AT ELEVATION 571.7 FT. ABOVE MEAN WATER LEVEL AT FATHER POINT, QUEBEC.

GRID COORDINATES

GRIDS SHOWN ARE BASED ON NATIONAL GEODETIC SURVEY PROJECTION TABLES, STATE OF MICHIGAN, SOUTH ZONE (2113), LAMBERT PROJECTION, 1983 NORTH AMERICAN DATUM.

DIRECTIONS

ALL DIRECTIONS ARE GRID AZIMUTHS REFERRED TO NORTH ZERO.

PROJECT DEPTHS

PROJECT DEPTHS ARE AS INDICATED ABOVE.

THE AUTOMATED ELECTRONIC SURVEY WAS CONDUCTED BY FRED LEECH, PARTY CHIEF, ABOARD THE USACE SURVEY LAUNCH 3043.

AUTOMATED EQUIPMENT USED

POSITIONING: STARLINK DGPS
DATA PROCESSOR: DELL PC
SOFTWARE: COASTAL OCEANOGRAPHICS
PLOTTER: ENCAD, CADJET 2
SONIC SOUNDER: INNERSPACE 448

N 402.000

E 13,540,000

E 13,541,000

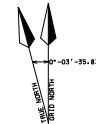
E 13,541,000

E 13,542,000

E 13,542,000

E 13,543,000

E 13,543,000



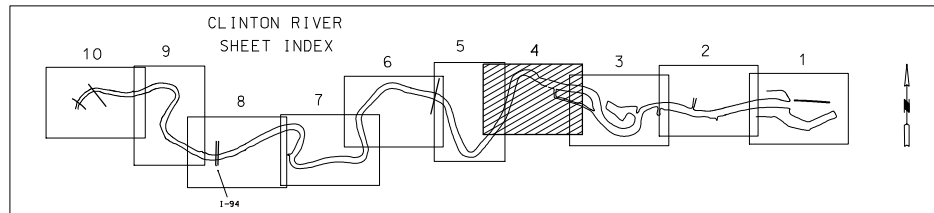
GRID SCALE FACTOR: 0.99991945
GRID DIST. DIVIDED BY GRID SCALE FACTOR = GROUND DIST.

N 404.000

N 403.000

NOTES:

1. GAGES USED WERE TAKEN FROM GAGE BOARD SET NEAR THE MOUTH OF THE CLINTON RIVER ON A DOCK PILING IN FRONT OF THE MACOMB COUNTY SHERIFF'S OFFICE
2. POSITIONS WERE DETERMINED BY GPS REFERENCE BEACON #38, LOCATED AT FORT WAYNE DETROIT, MICHIGAN - FREQUENCY 319 KHZ, 200 BPS
3. TRANSDUCER FREQUENCY USED TO MEASURE DEPTH DATA WAS 208 KHZ AND THE BEAM ANGLE WAS 3.0 DEGREES.



CENTER LINE T.P.

T.P.	EAST X	NORTH Y
12	13,542,795.97	403,723.29
13	13,542,079.40	403,891.36
14	13,541,653.20	404,282.74
15	13,541,215.67	404,132.65
16	13,540,680.93	402,464.02

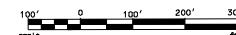
CHANNEL LINE T.P.

T.P.	EAST X	NORTH Y
12N	13,542,782.51	403,747.64
12S	13,542,719.44	403,686.93
13N	13,542,090.79	404,013.70
13S	13,542,068.01	403,969.02
14N	13,541,637.01	404,276.75
14S	13,541,649.40	404,225.74
14N1	13,541,716.11	404,182.89
14N2	13,541,870.59	404,203.87
15N	13,541,199.81	404,163.12
15S	13,541,238.32	404,112.18
15N1	13,541,321.56	404,134.95
15N2	13,541,213.64	404,030.81
16N	13,540,670.18	402,475.32
16S	13,540,775.48	402,452.72

HORIZONTAL CONTROL

STATION	COORDINATES	
	EAST X	NORTH Y
SUBS1	13,541,332.94	404,503.05
CR-19-B	13,541,515.99	404,361.99
DOCK	13,542,666.20	403,631.92

8.0 FT. CONTOUR
7.0 FT. CONTOUR



NO.	DATE	REVISION	BY
U.S. ARMY ENGINEER DISTRICT, DETROIT CORPS OF ENGINEERS DETROIT, MICHIGAN			
CLINTON RIVER, MICH.			
AFTER SOUNDINGS			
C.S. 97400W TO C.S. 139400W			
02 APR 2001			
DETROIT AREA OFFICE			
DESIGNED BY	DATE		
CHECKED BY	SCALE 1" = 100'		
REVIEWED BY	DRAWING NUMBER		
SUBMITTED BY	SHEET 4 OF 10		
APPROVAL RECOMMENDED BY	DATE		
CHIEF OF DISTRICT	DRAWING NUMBER		
LTC, C-E, DISTRICT ENGINEER	SHEET 4 OF 10		
DACW35-00-C-0025			